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CLAIMS

1. A method, comprising:  
providing a link transmitter having a plurality of logical channels;  
5 providing a link receiver coupled to the link transmitter;  
the link receiver providing a plurality of data credits to the link transmitter;  
the link transmitter transmitting a packet to the link receiver, wherein the link  
transmitter takes the packet from one of the plurality of logical channels, and wherein the  
link transmitter selects from which of the plurality of logical channels to draw the packet;  
10 diminishing the plurality of data credits as the packet is transmitted;  
the link receiver storing the packet in a plurality of receiver buffers;  
the link receiver updating the plurality of data credits; and  
the link transmitter allocating the plurality of data credits among the plurality of  
logical channels.
- 15 2. The method of claim 1, wherein updating the plurality of data credits comprises  
the link receiver transmitting a flow control packet to the link transmitter.
- 20 3. The method of claim 1, wherein updating the plurality of data credits comprises  
notifying the link transmitter of an empty portion of the plurality of receiver buffers.
- 25 4. The method of claim 1, wherein updating the plurality of data credits comprises  
adding additional data credits to the plurality of data credits, and wherein the link  
transmitter selects to which of the plurality of logical channels to allocate the additional  
data credits.
- 30 5. The method of claim 4, further comprising if the plurality of data credits are  
diminished before receiving the additional data credits, the link transmitter ceasing  
transmitting to the link receiver.
6. The method of claim 5, further comprising wherein if the link transmitter has  
ceased transmitting, the link transmitter resuming transmission upon receiving the  
additional data credits.

7. The method of claim 1, wherein the plurality of logical channels are a plurality of virtual lanes.

5           8. The method of claim 1, wherein the link receiver providing the plurality of data credits comprises the link receiver providing the plurality of data credits at initialization of a switch fabric network.

9. The method of claim 8, wherein the switch fabric network is one of an  
10 Infiniband network and a Serial RapidIO network.

10. A method, comprising:  
a link receiver providing a plurality of data credits to a link transmitter;  
the link transmitter transmitting a packet to the link receiver, wherein the link  
15 transmitter takes the packet from one of a plurality of logical channels, and wherein the link transmitter selects from which of the plurality of logical channels to draw the packet;  
diminishing the plurality of data credits as the packet is transmitted; and  
the link receiver transmitting a flow control packet to the link transmitter to add  
additional data credits to the plurality of data credits, wherein the link transmitter selects  
20 to which of the plurality of logical channels to allocate the additional data credits.

11. The method of claim 10, further comprising if the plurality of data credits are diminished before receiving the additional data credits, the link transmitter ceasing  
transmitting to the link receiver.

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12. The method of claim 11, further comprising wherein if the link transmitter has ceased transmitting, the link transmitter resuming transmission upon receiving the additional data credits.

13. The method of claim 10, wherein transmitting a flow control packet comprises  
30 notifying the link transmitter of an empty portion of a plurality of receiver buffers.

14. The method of claim 10, wherein the plurality of logical channels are a plurality of virtual lanes.

15. The method of claim 10, wherein the link receiver providing the plurality of data credits comprises the link receiver providing the plurality of data credits at initialization of a switch fabric network.

16. The method of claim 15, wherein the switch fabric network is one of an Infiniband network and a Serial RapidIO network.

17. The method of claim 10, wherein one of the plurality of data credits represents one of the plurality of receiver buffers being ready to receive data.

18. The method of claim 10, wherein one of the plurality of data credits corresponds to one of the plurality of receiver buffers being empty.

19. A computer-readable medium containing computer instructions for instructing a processor to perform a method of link flow control, the instructions comprising:  
a link receiver providing a plurality of data credits to a link transmitter;  
the link transmitter transmitting a packet to the link receiver, wherein the link transmitter takes the packet from one of a plurality of logical channels, and wherein the link transmitter selects from which of the plurality of logical channels to draw the packet;  
diminishing the plurality of data credits as the packet is transmitted; and  
the link receiver transmitting a flow control packet to the link transmitter to add additional data credits to the plurality of data credits, wherein the link transmitter selects to which of the plurality of logical channels to allocate the additional data credits.

20. The computer-readable medium of claim 19, further comprising if the plurality of data credits are diminished before receiving the additional data credits, the link transmitter ceasing transmitting to the link receiver.

21. The computer-readable medium of claim 20, further comprising wherein if the link transmitter has ceased transmitting, the link transmitter resuming transmission upon receiving the additional data credits.

5           22. The computer-readable medium of claim 19, wherein transmitting a flow control packet comprises notifying the link transmitter of an empty portion of a plurality of receiver buffers.

10           23. The computer-readable medium of claim 19, wherein the plurality of logical channels are a plurality of virtual lanes.

          24. The computer-readable medium of claim 19, wherein the link receiver providing the plurality of data credits comprises the link receiver providing the plurality of data credits at initialization of a switch fabric network.

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          25. The method of claim 24, wherein the switch fabric network is one of an Infiniband network and a Serial RapidIO network.

20           26. The method of claim 19, wherein one of the plurality of data credits represents one of the plurality of receiver buffers being ready to receive data.

          27. The method of claim 19, wherein one of the plurality of data credits corresponds to one of the plurality of receiver buffers being empty.